5.0 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The following sections discuss the unavoidable adverse environmental impacts that would not be mitigated to less than substantial. In some cases, these sections include discussions of potential impacts that cannot be determined at this time. These impacts would be determined at the final design phase.

As previously discussed, the (Enhanced) Reduced Build Alternative is a slight modification of the Reduced Build Alternative proposed in the August 2001 DEIR/EIS. The difference between the Reduced Build Alternative and the (Enhanced) Reduced Build Alternative is that the eastern terminus, previously proposed at Glassell Street, has been extended to approximately SR-55. The direct HOV connector to SR-55 is not part of the (Enhanced) Reduced Build Alternative. An auxiliary lane has been added from Glassell Street to Tustin Avenue in the eastbound direction, and HOV lanes have been extended from Glassell Street to Tustin Avenue in both directions. Please refer to Table 2.2-1, (Enhanced) Reduced Build Alternative Features. All of the elements of the TSM/Expanded Bus Alternative are included in the (Enhanced) Reduced Build.

Some of the additional analysis in this section may have been the result of refined engineering, responses to comments received during the public comment period of the DEIR/EIS, and/or additional planning efforts. The comments and responses to comments are attached as Appendix A (Volumes II and III) of this FEIS/EIR.

5.1 (ENHANCED) REDUCED BUILD ALTERNATIVE

5.1.1 Cultural Resources

During construction of the (Enhanced) Reduced Build Alternative, there is potential for unearthing unknown buried cultural materials and disturbing unknown human remains and associated artifacts that have not been located or catalogued. Procedural mitigation measures have been proposed should such materials be encountered. Residual impacts cannot be determined at this time. Earth moving activities will be monitored, and work will be halted if cultural materials or human remains are encountered. Appropriate Health and Safety Codes will be followed. Further mitigation will be in accordance with 36 CFR 800.13.

5.1.2 Community Impacts

Implementation of the (Enhanced) Reduced Build Alternative will result in the loss of 472 on-site parking spaces at four business locations in the City of Orange. Only two locations, Carl Karcher Enterprises and Amerisource-Bergen, would experience a loss of parking, resulting in a substantial impact. Additionally, Theo Lacy jail facility, east of the City Drive, would experience a potential impact to the planned parking for the expanded facility, resulting in the removal of an estimated 50 proposed parking spaces. The City of Orange stated appropriate parking variances would be granted to lessen the impacts of the project. However, it is important to note that determination of right-of-way impacts will not be finalized until the approval of final design.

5.1.3 Noise

Construction noise is only considered to be substantial in exceptional cases, such as pile driving and crack and seal pavement rehabilitation operations. Otherwise, the Department's Standard Specifications (Sections 7 and 42) and Standard Special Provisions provide limits on construction noise levels, with normal construction noise levels not exceeding 86 dBA at a distance of 15 meters (50 feet). The (Enhanced) Reduced Build Alternative may require pile driving and/or crack and seal pavement rehabilitation, and substantial short-term impacts would occur (see Section 4.9).

5.1.4 Visual Resources

The removal of landscaping for widening of the freeways and realignment of interchanges cannot be fully mitigated due to the lack of available area for replanting either within or outside the future right-of-way. The loss of landscaping would be a substantial visual impact (see Section 4.13). Existing landscaping within State right of way will be preserved and lost landscaping will be replaced where feasible. The replacement of landscaping with hard surfaces, such as soundwalls and structures would occur with implementation of the project. Use of vines, trees, and shrubs will be used to soften the effects of hard surfaces. Wall surfaces will be a potential substantial visual impact.

It is unlikely that all construction staging areas can be located inconspicuously, so short-term residual impacts would occur (see Section 4.15).

Subsequent to the release of the draft environmental document for this proposed project , there were numerous comments from the Rossmoor/Los Alamitos residents stating their concerns about the SR-22/I-405/I-605 HOV connector. These comments included what the residents termed "degradation of the western viewshed." These comments and the responses to them are included in Appendix A, Volumes II and III.

5.1.5 Construction Impacts

The (Enhanced) Reduced Build Alternative may require pile driving and/or cut and seal pavement rehabilitation, and substantial short-term impacts would occur (see Sections 4.9.3 and 4.15.1). In addition, there may be work conducted in the Santiago Creek and possibly in the Santa Ana River bed, which will require mitigation measures and permits from Resources Agencies.

OTHER ALTERNATIVES

5.2 NO BUILD ALTERNATIVE

5.2.1 Community Impacts

Since the No Build Alternative would not include improvements to major arterials or freeway systems as anticipated in local land use plans and policy documents, the goals of the cities along the SR-22 corridor to attain overall transportation mobility would go unmet (see Section 4.6).

5.3 TSM/EXPANDED BUS SERVICE ALTERNATIVE

5.3.1 Community Impacts

The TSM/Expanded Bus Service Alternative is not consistent with land use policies of local jurisdictions that anticipate improvements to mobility and transportation facilities (see Section 4.6).

5.3.2 Air Quality

Under current operating conditions, the TSM/Expanded Bus Service Alternative could result in increases in the pollutant burden over the No Build Alternative that would exceed the SCAQMD thresholds for nitrogen oxides. However, the SCAQMD's implementation of Rule 1192 requires all "…public transit fleet operators to acquire alternative-fuel heavy-duty vehicles when procuring or leasing these vehicles to reduce air toxic and criteria pollutant emissions." The assumption is that all future procurements for the Orange County Transportation Authority (OCTA) would be alternative fuel buses and this would not lead to exceedance in nitrogen dioxides for this alternative.

5.4 FULL BUILD ALTERNATIVE

5.4.1 Environmental Impacts

During construction of the Full Build Alternative, there is the potential for unearthing unknown buried cultural materials. The implementation of the Full Build Alternative would result in the removal of the Pacific Electric Santa Ana River Bridge, which is eligible for the National Register of Historic Places (see Section 4.5). There is no prudent and feasible avoidance for this impact (see Section 9.0) if the Full Build Alternative is chosen. However, the (Enhanced) Reduced Build Alternative, which is the identified Preferred Alternative, does not include removal of the Pacific Electric Santa Ana River Bridge.

5.4.2 Community Impacts

The removal of the former Pacific Electric right-of-way for an arterial in the Full Build Alternative would be inconsistent with the land use plans for the cities of Santa Ana and Garden Grove. The City of Santa Ana has designated the former Pacific Electric right-of-way as a class I bicycle trail, and as one of the variety of uses designated by the City of Garden Grove. However, this inconsistency could be mitigated if the designation is changed by the City of Santa Ana.

In addition, the removal of houses from one side of the street along Sherwood Lane in Santa Ana cannot be avoided under the Full Build Alternative. Since it would be difficult to relocate this community as a whole, substantial impacts to community cohesion that cannot be mitigated would occur.

Implementation of the Full Build Alternative will result in the loss of 571 on-site parking spaces at four business and two residential locations. Two business locations, Carl Karcher Enterprises and Amerisource-Bergen, and both residential locations at the City Gardens Apartments and the El Prado Drive residences would experience a substantial impact due to a loss of parking. Additionally, Theo Lacy jail facility, east of the City Drive, would experience a potential impact to the planned parking for the expanded facility, resulting in the removal of an estimated 50 proposed parking spaces. The City of Orange stated appropriate parking variances would be granted to lessen the impacts of the project. However, it is important to note that determination of right-of-way impacts will not be finalized until the approval of final design.

At the City Gardens Apartment complex in Santa Ana, the Full Build would remove existing parking and some residential units. The Full Build Alternative would result in a loss of one- third of the parking at the City Gardens Apartments. The complex currently does meet parking code requirements. Therefore, the Full Build Alternative would have a substantial adverse impact on parking at the City Gardens Apartment complex. The site is a legal non-conforming use because it does not have sufficient parking and because it is zoned for agriculture, not multi-family residential. Since the Full Build Alternative would make alterations to the site, it would lose its legal non-conforming use status, and can legally be forced by the City of Santa Ana to comply with the zoning and/or parking ordinances. This would lead to conversion to agriculture (and removal of all multi-family residences) and/or the creation of additional parking. Since there is not sufficient land available to add parking, at the least, additional units may have to be removed to create sufficient parking to meet the requirements. 542 parking spots would be needed to meet code.

5.4.3 Transportation and Circulation

The Full Build Alternative would result in HOV traffic entering the northbound SR-55 HOV lane in excess of its capacity. Since mitigation for this impact is not feasible, this would result in a substantial and unavoidable adverse traffic impact under this alternative (see Section 4.7).

5.4.4 Air Quality

The Full Build Alternative would result in increases in the pollutant burden over the No Build Alternative that would exceed the SCAQMD thresholds for nitrogen oxides. Because mitigation for nitrogen oxides is most effective on a regional scale, and because some of the elements of the Full Build Alternative are not

included in the existing (1998) RTP, this alternative would not conform with the existing RTP. This impact is considered substantial by SCAQMD.

5.4.5 Noise

Construction noise is only considered to be substantial in exceptional cases, such as pile driving and crack and seat pavement rehabilitation operations. These impacts would only be temporary due to construction activities. Otherwise, Caltrans' Standard Specifications (Section 7 and 42) and Standard Special Provisions provide limits on construction noise levels, with normal construction noise levels not exceeding 86 dBA at a distance of 15 meters (50 feet). The Full Build Alternative may require pile driving and/or crack and seat pavement rehabilitation, and substantial short-term impacts would occur (see Section 4.9).

5.3.6 Parks and Recreation

Since the Full Build Alternative would preclude the class I trail proposed by the City of Santa Ana for the former Pacific Electric right-of-way, and since no mitigation is available to prevent this impact, a substantial impact to this proposed trail would remain after mitigation (Section 4.10).

Substantial visual impacts would remain after mitigation at the following parks and recreation resources: Pacific Electric Commemorative Area and Willowick Municipal Golf Course (see Section 4.13).

5.3.7 Visual Resources

In locations where houses are removed, the visual impact to the remaining residential viewers cannot be fully mitigated and a residual visual impact would remain.

The removal of landscaping for widening of the freeways and realignment of interchanges cannot be fully mitigated due to the lack of available area for replanting either within or outside the future right-of-way. The loss of landscaping would be a substantial visual impact.

The use of the former Pacific Electric right-of-way for an arterial would also lead to the following visual impacts that also cannot be reduced to less than substantial after mitigation: the removal of open space, the addition of new light sources, and the removal of the historic Pacific Electric Santa Ana River Bridge.

The addition of elevated connectors to and from the Pacific Electric Arterial would also result in unmitigatable blockage of views of signs at the following businesses: the Shell Gas Station, Garden Grove Storage, and Allspace Storage (see Section 4.13).

It is unlikely that all construction staging areas can be located inconspicuously, so short-term residual impacts would occur (see Section 4.15).

5.3.8 Construction Impacts

The Full Build Alternative may require pile driving and/or crack and seat pavement rehabilitation, and substantial short-term impacts would occur (see Section 4.93. and 4.15.1).

Since the Full Build Alternative was not identified as the Preferred Alternative, the features from this alternative that would have caused unavoidable impact have been avoided. Where the Full Build (Enhanced) Reduced Build Alternative share common major project features such as the I-405/605 and I-405/SR-22 direct HOV connectors, and the Mainline, the impacts are the same as discussed in the (Enhanced) Reduced Build Alternative section of this chapter (See Section 5.1).

6.0 LOCAL SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

6.1 METHODOLOGY

The relationship between local short-term uses of our environment and the enhancement of its long-term productivity under the proposed alternatives is a required topic of discussion in a Final EIR/EIS under both CEQA and NEPA.

> *During the life of the SR-22/West Orange County Connection, there would be benefits and gains, as well as costs and impacts. This section presents an evaluation of the short-term use of the environment in relation to adverse effects on the maintenance or enhancement of long-term productivity.*

The Caltrans *Environmental Handbook – Volume I* (1995)[1] requires a summary of any tradeoffs caused by the proposed project that would lead to short-term (economic) gains at the expense of long-term (natural) productivity. During its life, a project should provide benefits. At the same time there will usually be costs, side effects and loss of natural resources that have long-term productive value. For this discussion, short-term and long-term relates to the time frame for environmentally significant consequences of the proposed action. Throughout the rest of this document, Caltrans will be referred to as the "Department."

Short-term uses include such benefits as improved transportation, better safety, lowered energy use, better public services, more efficient economic activities and improved development potential. Short-term uses also include such costs as construction materials consumed, disrupted community or economic activities, and existing homes or businesses removed. Long-term productivity refers to valuable uses for the existing environment (e.g., wetlands, open space, recreation areas, floodplains, wildlife habitat, groundwater recharge, areas that support rare species, or existing urban living and working places) and renewable resources (e.g., agriculture, timber, fisheries, ranching or water supply). Long-term productivity also refers to environmental quality such as low noise levels, clean air, pure water and low levels of other kinds of pollutants.

6.2 ANALYSIS

A. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

The discussion below will focus on the (Enhanced) Reduced Build Alternative and the short-term benefits, short-term costs/impacts and long-term productivity related to this alternative..

1. SHORT-TERM BENEFITS

Short-term benefits that would result from the (Enhanced) Reduced Build Alternative relate generally to improved traffic due to the availability of an alternative mode. There would be a small mode shift from drive-alone to transit (estimated 14 percent increase in transit ridership). The time spent commuting would decrease minimally (less than one percent) and there would be slightly higher speeds on the freeways (3.1 percent higher) compared to the No Build Alternative. Within the corridor (including parallel arterials), there would be slight increases in speeds at some screenlines, most significantly between Harbor Boulevard and Haster Street, where there would be over an eight-kilometer-per-hour (five-mile-per-hour) improvement. There would be a substantial travel time benefit over the No Build Alternative, 1.0 to 2.1 minutes per vehicle for SOVs and 2.8 to 4.9 minutes per vehicle for HOVs during peak periods.

[1] Available at Caltrans, District 12.

Of the 30 freeway segments studied on SR-22, the (Enhanced) Reduced Build Alternative would result in 13 fewer segments operating at LOS F than under the No Build Alternative. Eight fewer intersections would operate at LOS F.

There would be an estimated 19,703 short-term construction jobs associated with the (Enhanced) Reduced Build Alternative. Over the long term, there would be an undetermined increase in jobs due to the larger bus fleet, slightly increased maintenance labor needed for additional travel lanes and slightly increased traffic enforcement needs.

2. SHORT-TERM COSTS/IMPACTS

The cost of constructing the (Enhanced) Reduced Build Alternative is estimated at $511 million, including $468 million for construction and over $42 million for acquisition of additional right-of-way (in Year 2001 dollars).

Short-term impacts associated with the construction of the (Enhanced) Reduced Build Alternative would include (see Section 4.15.1):

- Disturbance of soils (reduced to less than substantial by mitigation)
- Sedimentation in runoff (prevented by mitigation)
- Exposure of construction workers to earthquake-induced risks (reduced to less than substantial by mitigation)
- Indirect impacts on wetlands from runoff or erosion (prevented by mitigation)
- Temporary construction-related impacts to Santiago Creek and Santa Ana River (reduced to less than substantial by mitigation)
- Traffic disruptions (reduced to less than substantial by mitigation)
- Air quality impacts (reduced to less than substantial by mitigation)
- Construction noise (may not be fully mitigated)
- Utility relocations (reduced to less than substantial by mitigation)
- Exposure to hazardous materials/wastes (reduced to less than substantial by mitigation)
- Reduction in visual quality (may not be fully mitigated)
- Energy use (less than substantial)
- Temporary construction easements

3. IMPACTS TO LONG-TERM PRODUCTIVITY

The (Enhanced) Reduced Build Alternative would acquire residences and businesses, as explained below. This alternative would require the acquisition of two residences and ten non-residential units. However, there are ample relocation sites for these displacements in the study area cities.

All elements of this alternative are included in the current (2000) RTP. Therefore, the (Enhanced) Reduced Build Alternative conforms to the existing RTP.

The (Enhanced) Reduced Build Alternative would remove approximately 60 percent of the existing freeway landscaping, with the majority of the landscaping remaining only at interchanges. This loss of the mature urban forest is a substantial impact. However, replacement landscaping would occur where adequate setbacks are available for replanting.

B. OTHER ALTERNATIVES

1. No Build Alternative

a. SHORT-TERM BENEFITS

Because the No Build Alternative would not include any improvements other than those discussed in other environmental documents, there would be no short-term benefits related to this alternative.

b. SHORT-TERM COSTS/IMPACTS

Because the No Build Alternative would not include any construction other than those discussed in other environmental documents, there would not be short-term costs or impacts related to this alternative.

c. IMPACTS TO LONG-TERM PRODUCTIVITY

Because there would be no construction under the No Build Alternative, there would also be no impacts to long-term productivity.

2. TSM/Expanded Bus Service Alternative

a. SHORT-TERM BENEFITS

The TSM/Expanded Bus Service Alternative would improve transportation, especially for transit. The transportation/circulation analysis shows that there would be a small mode shift from drive-alone to transit (estimated 17 percent increase in transit ridership). The time spent commuting would decrease slightly (by 0.5 percent) and there would be slightly higher speeds on the freeways (1.5 percent higher) compared to the No Build Alternative. Within the corridor (including parallel arterials), there would be slight increases in speed at some screenlines. There would be a small travel time benefit over the No Build Alternative, approximately a half-minute during peak periods.

Of the 30 freeway segments studied on SR-22, the TSM/Expanded Bus Service Alternative would result in one less segment operating at LOS F than under the No Build Alternative.

There would be a minimal number of construction jobs associated with the TSM/Expanded Bus Service Alternative. Over the long term, there would be an undetermined increase in jobs due to the larger bus fleet.

b. SHORT-TERM COSTS/IMPACTS

The TSM/Expanded Bus Service Alternative includes only minor construction compared to the two build alternatives. Cost estimates are $68 million (Year 2001 dollars), which includes the costs of additional bus service and advanced technology improvements such as signal synchronization and electronic message signs.

c. IMPACTS TO LONG-TERM PRODUCTIVITY

Because there would be limited construction under the TSM/Expanded Bus Service Alternative, there would also be limited impacts to long-term productivity.

The TSM/Expanded Bus Service Alternative is not consistent with land use policies of local jurisdictions that anticipate improvements to mobility and transportation facilities.

All elements of this alternative are included in the current (2000) RTP. Therefore, the TSM/Expanded Bus Service Alternative conforms to the existing RTP.

All elements of this alternative are also included under the (Enhanced) Reduced Build Alternative.

3. Full Build Alternative

a. SHORT-TERM BENEFITS

Short-term benefits that would result from the Full Build Alternative relate generally to improved traffic due to the availability of an alternative mode. Time spent commuting would decrease by about 4.5 percent, and freeway speeds would increase by about 4.1 percent. Travel time would improve substantially over the No Build Alternative (1.0 to 2.5 minutes per vehicle for SOV and 3.0 to 5.0 for HOV during peak periods).

Of the 30 freeway segments studied on SR-22, the Full Build Alternative would result in 13 less segments operating at LOS F than under the No Build Alternative. Six fewer intersections would operate at LOS F.

b. SHORT-TERM COSTS/IMPACTS

The cost of constructing the Full Build Alternative is estimated at approximately $763 million, including $683 million for construction and over $80 million for acquisition of additional right-of-way (in Year 2001 dollars). Short-term impacts include soil disturbance, sediment runoff, runoff or erosion impacts on wetlands, traffic disruptions, air quality impacts, construction noise, utility relocations, exposure to hazardous waste, loss of visual quality, and energy use. All impacts are either fully or substantially mitigated to less than significance except for construction noise and visual quality loss.

c. IMPACTS TO LONG-TERM PRODUCTIVITY

The Full Build Alternative would acquire residences and businesses, as explained below. This alternative would require the acquisition of 181 residences and 40 non-residential units. However, there are ample relocation sites for these displacements in the study area cities.

6.3 CONCLUSIONS

A. PREFERRED ALTERNATIVE/ (ENHANCED) REDUCED BUILD ALTERNATIVE

Table 6.3-1 demonstrates the benefit/impact comparison of the (Enhanced) Reduced Build Alternative. Note that only the impacts that cannot be mitigated below a substantial level are listed under impacts/costs. The (Enhanced) Reduced Build Alternative has a large number of benefits, only slightly less than the Full Build Alternative, and a much shorter list of impacts.

B. OTHER ALTERNATIVES

1. No Build Alternative

Since there would be no construction under the No Build Alternative, except as addressed in previous environmental documents, there would be no short-term benefits or impacts and no long-term impacts to productivity.

2. TSM/Expanded Bus Service Alternative

Table 6.3-2 demonstrates the benefit/impact comparison of the TSM/Expanded Bus Service Alternative. Note that only the impacts that cannot be mitigated below a substantial level are listed under impacts/costs. Because of the limited amount of construction proposed under the TSM/Expanded Bus Service Alternative, the costs and impacts are low, compared to the other alternatives. However, the benefits are also more limited.

3. Full Build Alternative

Table 6.3-3 demonstrates the benefit/impact comparison of the Full Build Alternative. Note that only the impacts that cannot be mitigated below a substantial level are listed under impacts/costs. The Full Build Alternative has a large number of benefits and also a large number of impacts. Many of these impacts are related to the Pacific Electric Arterial alone.

Table 6.3.1
BENEFIT/IMPACT COMPARISON
(ENHANCED) REDUCED BUILD ALTERNATIVE

Benefits	Impacts/Costs
• 14% increase in transit ridership • Minimal decrease in time spent commuting • 3.1% higher speeds on freeways • Slightly higher speeds at some screenlines • 1.0- to 2.1-minute travel time benefit for SOVs during peak periods • 2.8- to 4.9-minute travel time benefit for HOVs during peak periods • 13 fewer freeway segments at LOS F • 8 fewer intersections at LOS F • 13,548 short-term construction jobs • Undetermined additional long-term jobs related to larger bus fleet and increased maintenance and traffic enforcement needs	• $510 million cost to construct • Construction noise • Reduction in visual quality during construction • Exceeds pollutant burden thresholds for nitrogen oxides • Removal of 60% of the existing freeway landscaping • Reduction in visual quality to views of and from the freeway

Table 6.3-2
BENEFIT/IMPACT COMPARISON
TSM/EXPANDED BUS SERVICE ALTERNATIVE

Benefits	Impacts/Costs
• 17% increase in transit ridership • 5% decrease in time spent commuting • 1.5% higher speeds on freeways • Slightly higher speeds at some screenlines • ½-minute travel time benefit during peak periods • 1 fewer freeway segment at LOS F • Undetermined number of construction jobs • Undetermined additional long-term jobs related to larger bus fleet	• $68 million cost to construct • Exceeds pollutant burden threshold for nitrogen oxides

Table 6.3-3
BENEFIT/IMPACT COMPARISON
FULL BUILD ALTERNATIVE

Benefits	Impacts/Costs
• 14% increase in transit ridership • 4.5% decrease in time spent commuting • 4.1% higher speeds on freeways • Slightly higher speeds at all screenlines (esp. between Harbor Blvd. and Haster St.) • 1.0- to 2.5-minute travel time benefit for SOVs during peak periods • 3.0- to 5.0-minute travel time benefit for HOVs during peak periods • 13 fewer freeway segments at LOS F • 6 fewer intersections at LOS F • Direct connection to downtown Santa Ana could stimulate economic development, with fiscal and employment benefits • 21,528 short-term construction jobs • Undetermined additional long-term jobs related to larger bus fleet and increased maintenance and traffic enforcement needs	• $763 million cost to construct • Construction noise • Reduction in visual quality during construction • Permanent loss of open space (former Pacific Electric right-of-way) • Preclusion of planned Pacific Electric class I bicycle trail • Removal of Pacific Electric Santa Ana River Bridge (eligible for NRHP) • Exceeds pollutant burden thresholds for nitrogen oxides • Preclude use of the former Pacific Electric right-of-way as designated by Garden Grove and Santa Ana • Community cohesion impacts to several communities • Removal of 66% of the existing freeway landscaping • Reduction in visual quality to views of and from the freeway • New light sources in previously dark area • Obstruction of freeway-oriented signage

7.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

7.1 METHODOLOGY

The discussion of irreversible and irretrievable commitments of resources that would be used by the project alternatives is a required topic in a Final EIS/EIR under both NEPA and CEQA. This section covers what important resources would be used or removed by the project. These could include:

- The materials, labor and energy needed to build the project
- Materials, labor and energy consumed in maintenance and operation of the project
- Land, and present uses of that land, directly taken to make way for the project (e.g., agricultural land, housing, wildlife habitat)
- Environmental conditions degraded or destroyed by the project (e.g., polluted waters, reduced wildlife populations, noisier communities)
- Properties indirectly used by the project (e.g., fill disposal sites, borrow sites, sediment basins)
- Public service capacities used up by the project (e.g., available water supply, storm sewer capacity or police patrol time committed)

In addition, this section discusses significant cumulative resource use due to other projects that are interrelated to the one being proposed (e.g., induced growth, new mining, new recreation uses). If building the project would prevent any planned or expected uses of land, property or resources, that must also be described.

In the following sections, short-term, construction-related impacts are not discussed because these impacts are not irreversible or irretrievable commitments of resources.

7.2 ANALYSIS

1. PREFERRED ALTERNATIVE/(ENHANCED) REDUCED BUILD ALTERNATIVE

a. RESOURCES USED DURING CONSTRUCTION

The estimated construction cost for the (Enhanced) Reduced Build Alternative would be $511 million. An estimated 19,703 short-term construction jobs would be required for this alternative. Construction energy used under the (Enhanced) Reduced Build Alternative would be approximately 8,768 billion BTUs or about 1,511,756 barrels of crude oil. See C, LAND AND LAND USES TAKEN, below, for a discussion of right-of-way acquisitions.

b. RESOURCES USED FOR MAINTENANCE/OPERATION

An undetermined amount of additional labor and materials would be required to maintain the additional lanes and widened interchanges that are included in the (Enhanced) Reduced Build Alternative. This alternative includes the same additional buses (approximately 50) proposed under the TSM/Expanded Bus Service Alternative, and additional labor to operate, maintain and manage these buses would be required. (See also F, PUBLIC SERVICE CAPACITIES AFFECTED, below.) The additional energy consumption during operation would be approximately 25,500 billion BTUs or about 915 million liters (4.40 million barrels) of oil annually.

c. LAND AND LAND USES TAKEN

Additional right-of-way would be required for the improvements proposed under the (Enhanced) Reduced Build Alternative. A total of two residential and ten non-residential units would be displaced for the project. Although relocation of the residents and businesses affected would be possible within the local area, the conversion of this land from residential and commercial land uses would be an irreversible commitment.

Parking Impact. Implementation of the (Enhanced) Reduced Build Alternative would result in the loss of 472 on-site parking spaces at four locations in Orange. Carl Karcher Enterprises, Amerisource-Bergen, and One City Plaza would have a loss of parking due to the (Enhanced) Reduced Build Alternative, resulting in a significant impact. The removal of parking at The Block would not result in a significant impact because the quantity of residual parking exceeds the quantity required to meet code. Furthermore, One City Plaza and The Block currently share parking. When examined together, the combined parking at these locations would exceed the approximate number of combined parking to meet code. Therefore, the (Enhanced) Reduced Build Alternative would not have a substantial adverse impact on parking at One City Plaza and The Block.

d. ENVIRONMENTAL CONDITIONS DEGRADED OR DESTROYED

The (Enhanced) Reduced Build Alternative has a number of impacts that represent a degradation or destruction of existing environmental conditions, thereby resulting in an irretrievable loss of resources. The visual environment would be substantially affected by the removal of approximately 60 percent of the freeway landscaping, affecting views both of the freeways and from them.

e. OFF-SITE PROPERTIES INDIRECTLY USED

The (Enhanced) Reduced Build Alternative would not require substantial amounts of fill or result in large amounts of excess material. There would be demolition resulting from the acquisition of two residential units and ten business units, which would require disposal. In addition, several freeway structures would be replaced. Much of this material would be recycled, but large quantities would require disposal. These construction activities would result in use of landfill space as well as borrow sites, sediment basins and stockpile areas. Although adequate storage areas may be available within the work site, additional space may be needed for these activities as well as for staging construction equipment. (See F, PUBLIC SERVICE CAPACITIES AFFECTED, below).

f. PUBLIC SERVICE CAPACITIES AFFECTED

The (Enhanced) Reduced Build Alternative would require disposal of materials associated with demolition that cannot be recycled. In some cases, this may include hazardous materials, including asbestos, lead-based paint, contaminated soil and hazardous materials storage tanks, pipes, etc. Adequate capacity exists in the local area for such disposal.

The HOV lanes that would be added to SR-22 would require additional CHP manpower to patrol.

B. OTHER ALTERNATIVES

1. No Build Alternative

Since the No Build Alternative would not include additional construction, except that analyzed in other environmental documents, no additional or incremental increase in irreversible or irretrievable commitment of resources would be required.

2 TSM/Expanded Bus Service Alternative

The TSM/Expanded Bus Service Alternative was not identified as the Preferred Alternative, but its elements are included in the (Enhanced) Reduced Build Alternative discussed above.

a. RESOURCES USED DURING CONSTRUCTION

The TSM/Expanded Bus Service Alternative would include a limited amount of construction. The estimated construction cost for the TSM/Expanded Bus Service Alternative would be $68 million.

b. RESOURCES USED FOR MAINTENANCE/OPERATION

A minimal amount of additional labor and materials would be required to maintain the improvements associated with TSM/Expanded Bus Service Alternative. This alternative includes additional buses (approximately 50), which would require additional labor to operate, maintain, and manage.

c. PUBLIC SERVICE CAPACITIES AFFECTED

Because of the limited amount of construction associated with the TSM/Expanded Bus Service Alternative, public service capacities would not be substantially affected. The exception would be the additional labor hours required for security and law enforcement for the additional buses. For the most part, however, this service is provided by the transit operators, so public services would be largely unaffected.

3. Full Build Alternative

The Full Build Alternative discussions on irreversible and irretrievable resources will be summarized here.

a. LAND AND LAND USES TAKEN

Additional right-of-way would be required for the improvements proposed under the Full Build Alternative. A total of 181 residential units and 40 non-residential units were proposed for displacements under this alternative in the DEIR/EIS; however in response to comments and refined surveys, 144 residential and 39 nonresidential units are proposed in this FEIS/R. However, where this Full Build Alternative and the (Enhanced) Reduced Build Alternative share common project features, the impacts are the same as the (Enhanced) Reduced Build Alternative. For instance, if a right-of-way impact was avoided in the Mainline portion of the project, it would generally apply to the Full Build Alternative.

The Full Build Alternative, specifically the Pacific Electric Arterial, would convert land currently used as open space and agriculture to a transportation use. This open space in Santa Ana has been designated as a future Class I bicycle trail.

At the City Gardens Apartment complex in Santa Ana, the Full Build would remove existing parking and some residential units. The site is a legal non-conforming use because it does not have sufficient parking and because it is zoned for agriculture, not multi-family residential.

Parking Impact. Implementation of the Full Build Alternative would result in the loss of 571 on-site parking spaces at six locations in Garden Grove, Santa Ana and Orange. Two business locations, Carl Karcher Enterprises and Amerisource-Bergen, and both residential locations at the City Gardens Apartments and the El Prado Drive would experience a substantial parking impact. Additionally, Theo Lacy jail facility, east of the City Drive, would experience a potential impact to the planned parking for the expanded facility, resulting in the removal of an estimated 50 proposed parking spaces. The City of Orange stated appropriate parking variances would be granted to lessen the impacts of the project.

b. ENVIRONMENTAL CONDITIONS DEGRADED OR DESTROYED

The Full Build Alternative has a number of impacts that represent a degradation or destruction of existing environmental conditions, thereby resulting in an irretrievable loss of resources. The Pacific Electric Santa Ana River Bridge, which is eligible for the National Register of Historic Places, would be taken by the project. This bridge is the last remnant of the Pacific Electric Railroad in the area. There are potentially difficult relocation issues with a number of properties that would be taken by the Full Build Alternative, resulting in impacts to community cohesion, creation of non-conforming uses and problems with relocating high-visibility service stations. There would be traffic impacts related to limited HOV capacity on the connecting SR-55 that cannot be mitigated. The pollution burden for nitrogen oxides would exceed the SCAQMD thresholds. The visual environment would be substantially affected.

c. OFF-SITE PROPERTIES INDIRECTLY USED

The Full Build Alternative would not require substantial amounts of fill or result in large amounts of excess material. There would be demolition resulting from the acquisition of 181 residential units and 40 business units, which would require disposal. In addition, several freeway structures would be replaced. Much of this material would be recycled, but large quantities would require disposal.

d. PUBLIC SERVICE CAPACITIES AFFECTED

The Full Build Alternative would require disposal of materials associated with demolition that cannot be recycled. In some cases, hazardous materials are included in these materials, including asbestos, lead-based paint, contaminated soil, and hazardous materials storage tanks, pipes, etc. Adequate capacity exists in the local area for such disposal.

The HOV lanes that would be added to SR-22 would require additional CHP manpower to patrol.

e. CUMULATIVE IMPACTS DUE TO RELATED PROJECTS/GROWTH INDUCEMENT

Because the Full Build Alternative is located in an area that is nearly built out, and since the project includes only one new interchange, this alternative would not be substantially growth inducing. There are no other related projects. Thus, it would not result in cumulative impacts to resources.

This Page Intentionally Blank